OIPE IAP91
JUN 17 2008
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Doc Code: AP.PRE.REQ

PTO/SB/33 (07-05)
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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional): 392.1824

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on JUNE 17, 2008

Signature

Typed or printed name KARI P. FOOTLAND

Application Number 10/685,498	Filed 10/16/2003
First Named Inventor KAZUNORI BAN	
Art Unit 2624	Examiner D. ROSARIO

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record.
Registration number 55,187

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 ______

Signature

KARI P. FOOTLAND
Typed or printed name

202-434-1500
Telephone number

JUNE 17, 2008
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Docket No.: 392.1824

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Kazunori BAN et al.

Serial No. 10/685,498	Group Art Unit: 2624
Confirmation No. 5372	
Filed: October 16, 2003	Examiner: Dennis ROSARIO

For: THREE-DIMENSIONAL VISUAL SENSOR

PRE-APPEAL BRIEF CONFERENCE REQUEST

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

The Applicants respectfully request review of the rejection mailed March 17, 2008 in the above-identified application. No amendments are being filed with this request. This request is being field with a Notice of Appeal.

Claims 21-32 were previously withdrawn. Claims 1-32 are pending. Claims 1-20 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,879,664 to Suyama et al. A pre-appeal brief panel review of the identified appealable issues I and II is requested.

I. Rejection under 35 U.S.C. § 112

The term "on," based on the present specification and Figs. 1 and 2, for example, clearly suggests that the information is being stored "about a surface," and is not stored on top of a surface. The specification clearly recites that the information is stored in a storage means and that the information which is stored is information about a surface of a region. It is inconsistent with the definition as set forth in the present specification that the term "on" means literally storing information on a surface, as opposed to storing information about a surface of a region. Accordingly, it is respectfully requested that the § 112 rejection be withdrawn.

II. Rejection under 35 U.S.C. § 102(b)

a. "Means for capturing an image of the objective workpiece and determining a region corresponding to said first region in the image of the objective workpiece" and "means for determining a region corresponding to said second region based on information on a position of the region determined as corresponding to said first region and said reference information stored in said storage means"

Suyama does not discuss or suggest "means for capturing an image of the objective workpiece and determining a region corresponding to said first region in the image of the objective workpiece," and "means for determining a region corresponding to said second region based on information on a position...of the region determined as corresponding to said first region and said reference information stored in said storage means," as recited in independent claims 1, 6, 11 and 16.

As shown in Fig. 2 of the present specification, an image of the objective workpiece is captured and region A', corresponding to the first region (region A), is determined. Further, region B', corresponding to the second region (region B), is determined based on information on a position of the region (region A') determined as corresponding to the first region (region A) and the stored reference information (information on regions A and B).

First, the spots S1-S4 are not regions or surfaces of regions, but are merely single points that are formed at intersection points between oblique beams and workpiece 9.

Further, Suyama discusses that spots S1-S4 are compared with reference marks M1-M4. Suyama does not suggest that a region corresponding to the obtained first region is determined, and that a region corresponding to the obtained second region is determined based on information on a position of the region determined as corresponding to the first region and stored reference information, which is obtained from the 2-D image of the reference workpiece, which indicates the relative positions of the first and second regions.

The Examiner alleges that the first region obtained from the 2-D image of the reference workpiece corresponds with mark M1, the region corresponding to the first region corresponds with spot S1, the second region obtained from the 2-D image of the reference workpiece corresponds with mark M2, and the region corresponding to the second region corresponds with spot S2. However, the spot S2 is a spot formed at an intersection point between oblique beams and the workpiece 9. Changes in distance and posture with respect to workpiece 9 appear as deviations in the bright spots S1-S4. Thus, if the distance between head 3 and workpiece 9 is larger than that between head 3 and workpiece 9' (which is workpiece 9 represented with proper posture of the head 3 and a distance between the workpiece 9 and the head at a predetermined value) located at the reference position, then the bright spots S1-S4 are located outside reference marks M1-M4.

However, spot S2 is not a region that is determined to correspond with reference mark M2 (alleged as the second region) based on information on a position of spot S1 (alleged by the Examiner as the region corresponding to the first region) determined as corresponding to the reference mark M1 (alleged by the Examiner as the first region) and reference information on a surface of mark M1 (alleged by the Examiner as the first region) and on a surface of mark M2 (alleged by the Examiner as the second region). The spot S2 is not determined to correspond to mark M2 based on information on a position of spot S1 and reference information on mark M1 and mark M2. The spot S2 is merely a point, and not a region, to be compared with the reference marks M1-M4 to determine changes in distance and posture with respect to workpiece 9.

In contrast, the present invention of claims 1, 6, 11 and 16 determines a region corresponding to a second region based on information on a position of the region determined as corresponding to a first region and the reference information, which is the relative positions of the first and second regions (A and B) that is stored in the storage means. As shown in Figs. 1 and 2 of the present specification, a first region A that includes a characteristic part of an objective workpiece is determined, a second region B is set as a target region of 3-D measurement of the objective workpiece, reference information on the first A and second B regions is obtained from a 2-D image of a reference workpiece, a region A' that corresponds to the first region A in the 2-D image of the objective workpiece is determined, and a region B' that corresponds to the second region B based on information on a position of the region B' determined as corresponding to the first region A and the reference information (as to the first region A and the second region B) is determined. Thus, 3-D information on the objective workpiece is able to be obtained in the region (region B') determined as corresponding to the second region (region B) of an image of the objective workpiece (Fig. 2).

Suyama does not determine a region corresponding to a second region (being a target region of 3-D measurement of an objective workpiece) based on information on a position of a region determined as corresponding to a first region (including a characteristic part of the objective workpiece) and reference information (on a surface of the first region and on a surface of the second region). Spot S2 is not determined to correspond to mark M2 based on information on spot S1 and reference information as to mark M1 and mark M2. Spot S2 is merely compared, along with spots S1, S3 and S4, to reference marks M1-M4 to determine whether there is a deviation, which indicates changes in distance and posture with respect to workpiece 9.

b. "Means for detecting a two-dimensional image of a reference workpiece of a same type as the objective workpiece" and "means for capturing an image of the objective workpiece"

Suyama does not discuss or suggest detecting a two-dimensional image of a reference workpiece of a same type as an objective workpiece and also, distinct from detecting an image of a reference workpiece, capturing an image of an objective workpiece. Suyama does not suggest that an image of an objective workpiece, which is separate from the detected image of a reference workpiece, is captured.

Suyama discusses that workpiece 9' is located at a reference position, but not that workpiece 9' is a reference workpiece and that workpiece 9 is an objective workpiece. Suyama specifically discusses that "[i]f the distance between workpiece 9 and head 3 is a predetermined value and the posture of head 3 is proper, the workpiece is represented as workpiece 9'." Thus, Suyama does not distinguish between a reference workpiece and an objective workpiece of a same type as the reference workpiece.

c. "Means for storing, as reference information, information on a surface of a first region including a characteristic part of the objective workpiece and a surface of a second region as a target region of three-dimensional measurement of the objective workpiece, said information on the first and second regions being obtained from the detected two-dimensional image of the reference workpiece of the same type as the objective workpiece, which is captured from a predetermined position"

Suyama does not discuss or suggest "means for storing, as reference information, information on a surface of a first region including a characteristic part of the objective workpiece and a surface of a second region as a target region of three-dimensional measurement of the objective workpiece, said information on the first and second regions being obtained from the detected two-dimensional image of the reference workpiece of the same type as the objective workpiece, which is captured from a predetermined position," as recited in independent claims 1, 6, 11 and 16.

Specifically, the Examiner alleges that the detected 2-D image is of a reference workpiece, which the Examiner has alleged corresponds with workpiece 9'. However, Suyama particularly recites that marks M1-M4 are reference marks of the workpiece 9' located at the reference position. The mark M1 is not information on a surface of a first region including a characteristic part of an objective workpiece and the mark M2 is not information on a surface of a second region as a target region of 3-D measurement of the objective workpiece.

d. "Means for obtaining three-dimensional information on the objective workpiece in the region determined as corresponding to said second region of an image of the objective workpiece captured by projecting said reference beam onto the objective workpiece"

Suyama does not discuss or suggest obtaining 3-D information on the objective workpiece in the region determined as corresponding to the second region of an image of the objective workpiece captured by projecting a reference beam onto the objective workpiece. Specifically, Suyama does not suggest obtaining 3-D information on an objective workpiece in the bright spot S2, which the Examiner alleges corresponds to the region determined as corresponding to the second region of an image of the objective workpiece. Bright spot S2 is not a region in which 3-D information on an objective workpiece is obtained.

Claims 2-5, 7-10, 12-15 and 17-20 depend either directly or indirectly from independent claims 1, 6, 11 and 16 and include all the features of their independent claims, plus additional features that are not discussed or suggested by the references relied upon. Therefore, claims 2-5, 7-10, 12-15 and 17-20 patentably distinguish over the references relied upon for at least the reasons noted above.

Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

Conclusion

In accordance with the foregoing, claims 1-20 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited. Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters. If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 6/17/08

By:
Kari P. Footland
Registration No. 55,187

1201 New York Avenue, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501